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#2

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P.5

RAW SEQUENCE LISTING

DATE: 11/19/2001

PATENT APPLICATION: US/09/987,190

TIME: 11:12:00

Input Set : A:\1422-0502P.ST25.txt

Output Set: N:\CRF3\11192001\I987190.raw

ENTERED

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3 <110> APPLICANT: TAKESAKO, Kazutoh
4     MIZUTANI, Shigetoshi
5     ENDO, Masahiro
6     KATO, Ikunoshin
8 <120> TITLE OF INVENTION: FUNGAL ANTIGENS AND PROCESS FOR PRODUCING THE SAME
10 <130> FILE REFERENCE: 1422-0502P
C--> 12 <140> CURRENT APPLICATION NUMBER: US/09/987,190
C--> 13 <141> CURRENT FILING DATE: 2001-11-13
15 <150> PRIOR APPLICATION NUMBER: 09/262,856
16 <151> PRIOR FILING DATE: 1999-03-04
18 <160> NUMBER OF SEQ ID NOS: 15
20 <170> SOFTWARE: PatentIn Ver. 2.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 50
24 <212> TYPE: PRT
25 <213> ORGANISM: Candida albicans
27 <220> FEATURE:
28 <221> NAME/KEY: Unsure
29 <222> LOCATION: (1)..(50)
30 <223> OTHER INFORMATION: any Xaa = any amino acid, unknown or other
32 <400> SEQUENCE: 1
33 Ala Ser Thr Lys Lys Tyr Asp Val Val Val Ile Gly Gly Gly Pro Gly
34   1           5           10           15
36 Gly Tyr Val Ala Ala Ile Lys Ala Ala Gln Leu Gly Leu Asn Thr Ala
37           20           25           30
W--> 39 Xaa Ile Glu Lys Arg Gly Ala Leu Gly Gly Thr Xaa Leu Asn Val Gly
40           35           40           45
W--> 42 Xaa Ile
43           50
46 <210> SEQ ID NO: 2
47 <211> LENGTH: 30
48 <212> TYPE: PRT
49 <213> ORGANISM: Candida albicans
51 <220> FEATURE:
52 <221> NAME/KEY: Unsure
53 <222> LOCATION: (1)..(30)
54 <223> OTHER INFORMATION: any Xaa = any amino acid, unknown or other
56 <400> SEQUENCE: 2
57 Lys Tyr Ser Leu Pro Glu Leu Asp Tyr Glu Phe Ser Ala Thr Glu Pro
58   1           5           10           15
W--> 60 Tyr Ile Ser Gly Gln Ile Asn Glu Ile Xaa Tyr Thr Xaa Xaa
61           20           25           30
64 <210> SEQ ID NO: 3
65 <211> LENGTH: 31
66 <212> TYPE: PRT
67 <213> ORGANISM: Candida albicans
69 <400> SEQUENCE: 3

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```

70 Ala Ser Ala Glu Pro Thr Leu Lys Gln Arg Leu Glu Glu Ile Leu Pro
71   1           5           10           15
73 Ala Lys Ala Glu Glu Val Lys Gln Phe Lys Lys Glu His Gly Lys
74           20           25           30
77 <210> SEQ ID NO: 4
78 <211> LENGTH: 30
79 <212> TYPE: PRT
80 <213> ORGANISM: Candida albicans
82 <400> SEQUENCE: 4
83 Lys Phe Thr Asp Asp Tyr Tyr Ser Lys Ile Ala Asp Asp Tyr Ile Glu
84   1           5           10           15
86 Phe Thr Tyr Lys Asn Pro Thr Ile Tyr His Val Val Asn Phe
87           20           25           30
90 <210> SEQ ID NO: 5
91 <211> LENGTH: 491
92 <212> TYPE: PRT
93 <213> ORGANISM: Candida albicans
95 <400> SEQUENCE: 5
96 Met Leu Arg Ser Phe Lys Ser Ile Pro Ala Asn Gly Lys Leu Ala Gln
97   1           5           10           15
99 Phe Val Arg Tyr Ala Ser Thr Lys Lys Tyr Asp Val Val Val Ile Gly
100           20           25           30
102 Gly Gly Pro Gly Gly Tyr Val Ala Ala Ile Lys Ala Ala Gln Leu Gly
103           35           40           45
105 Leu Asn Thr Ala Cys Ile Glu Lys Arg Gly Ala Leu Gly Gly Thr Cys
106           50           55           60
108 Leu Asn Val Gly Cys Ile Pro Ser Lys Ser Leu Leu Asn Asn Ser His
109   65           70           75           80
111 Leu Leu His Gln Ile Gln His Glu Ala Lys Glu Arg Gly Ile Ser Ile
112           85           90           95
114 Gln Gly Glu Val Gly Val Asp Phe Pro Lys Leu Met Ala Ala Lys Glu
115           100          105          110
117 Lys Ala Val Lys Gln Leu Thr Gly Gly Ile Glu Met Leu Phe Lys Lys
118           115          120          125
120 Asn Lys Val Asp Tyr Leu Lys Gly Ala Gly Ser Phe Val Asn Glu Lys
121           130          135          140
123 Thr Val Lys Val Thr Pro Ile Asp Gly Ser Glu Ala Gln Glu Val Glu
124   145          150          155          160
126 Ala Asp His Ile Ile Val Ala Thr Gly Ser Glu Pro Thr Pro Phe Pro
127           165          170          175
129 Gly Ile Glu Ile Asp Glu Glu Arg Ile Val Thr Ser Thr Gly Ile Leu
130           180          185          190
132 Ser Leu Lys Glu Val Pro Glu Arg Leu Ala Ile Ile Gly Gly Gly Ile
133           195          200          205
135 Ile Gly Leu Glu Met Ala Ser Val Tyr Ala Arg Leu Gly Ser Lys Val
136           210          215          220
138 Thr Val Ile Glu Phe Gln Asn Ala Ile Gly Ala Gly Met Asp Ala Glu
139   225          230          235          240
141 Val Ala Lys Gln Ser Gln Lys Leu Leu Ala Lys Gln Gly Leu Asp Phe

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Input Set : A:\1422-0502P.ST25.txt

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142          245          250          255
144 Lys Leu Gly Thr Lys Val Val Lys Gly Glu Arg Asp Gly Glu Val Val
145          260          265          270
147 Lys Ile Glu Val Glu Asp Val Lys Ser Gly Lys Lys Ser Asp Leu Glu
148          275          280          285
150 Ala Asp Val Leu Leu Val Ala Ile Gly Arg Arg Pro Phe Thr Glu Gly
151          290          295          300
153 Leu Asn Phe Glu Ala Ile Gly Leu Glu Lys Asp Asn Lys Gly Arg Leu
154 305          310          315          320
156 Ile Ile Asp Asp Gln Phe Lys Thr Lys His Asp His Ile Arg Val Ile
157          325          330          335
159 Gly Asp Val Thr Phe Gly Pro Met Leu Ala His Lys Ala Glu Glu Glu
160          340          345          350
162 Gly Ile Ala Ala Glu Tyr Ile Lys Lys Gly His Gly His Val Asn
163          355          360          365
165 Tyr Ala Asn Ile Pro Ser Val Met Tyr Thr His Pro Glu Val Ala Trp
166          370          375          380
168 Val Gly Leu Asn Glu Glu Gln Leu Lys Glu Gln Gly Ile Lys Tyr Lys
169 385          390          395          400
171 Val Gly Lys Phe Pro Phe Ile Ala Asn Ser Arg Ala Lys Thr Asn Met
172          405          410          415
174 Asp Thr Asp Gly Phe Val Lys Phe Ile Ala Asp Ala Glu Thr Gln Arg
175          420          425          430
177 Val Leu Gly Val His Ile Ile Gly Pro Asn Ala Gly Glu Met Ile Ala
178          435          440          445
180 Glu Ala Gly Leu Ala Leu Glu Tyr Gly Ala Ser Thr Glu Asp Ile Ser
181          450          455          460
183 Arg Thr Cys His Ala His Pro Thr Leu Ser Glu Ala Phe Lys Glu Ala
184 465          470          475          480
186 Ala Leu Ala Thr Phe Asp Lys Pro Ile Asn Phe
187          485          490
190 <210> SEQ ID NO: 6
191 <211> LENGTH: 188
192 <212> TYPE: PRT
193 <213> ORGANISM: Candida albicans
195 <400> SEQUENCE: 6
196 Ala Thr Glu Pro Tyr Ile Thr Gly Gln Met Asn Glu Ile His Tyr Thr
197 1          5          10          15
199 Lys His His Gln Thr Tyr Val Asn Asn Leu Asn Ala Ser Ile Glu Gln
200          20          25          30
202 Ala Val Glu Ala Lys Ser Lys Gly Glu Val Lys Lys Leu Val Ala Leu
203          35          40          45
205 Gln Lys Ala Ile Asn Phe Asn Gly Gly Gly Tyr Leu Asn His Cys Leu
206          50          55          60
208 Trp Trp Lys Asn Leu Ala Pro Val Ser His Gly Gly Gln Pro Pro
209 65          70          75          80
211 Ser Glu Asp Ser Lys Leu Gly Lys Gln Ile Val Lys Gln Phe Gly Ser
212          85          90          95
214 Leu Asp Lys Leu Ile Glu Ile Thr Asn Gly Lys Leu Ala Gly Ile Gln

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Input Set : A:\1422-0502P.ST25.txt

Output Set: N:\CRF3\11192001\I987190.raw

```

215          100          105          110
217 Gly Ser Gly Trp Ala Phe Ile Val Lys Asn Lys Ala Asn Gly Asp Thr
218          115          120          125
220 Ile Asp Val Ile Thr Thr Ala Asn Gln Asp Thr Val Thr Asp Leu Asn
221          130          135          140
223 Leu Val Pro Leu Ile Ala Ile Asp Ala Trp Lys His Ala Tyr Tyr Leu
224 145          150          155          160
226 Gln Tyr Gln Asn Val Lys Ala Asp Tyr Phe Lys Asn Leu Trp His Val
227          165          170          175
229 Ile Asn Trp Lys Glu Ala Glu Arg Arg Phe Glu Phe
230          180          185
233 <210> SEQ ID NO: 7
234 <211> LENGTH: 1750
235 <212> TYPE: DNA
236 <213> ORGANISM: Candida albicans
238 <400> SEQUENCE: 7
239 ctccagagaga ccggactaaa gattctataa atattctttc tttctgttca cattatatat 60
240 tcttctcaac aaatgttaag atcattcaaa tctattccag ccaatggaaa attggcccag 120
241 tttgttagat atgcatcaac caagaaatac gacgttggtg tcattggtgg tggaccaggt 180
242 gggtagcttg ctgccatcaa ggccgctcaa ttaggattaa aactgcctg tattgaaaaa 240
243 agaggtgcat tgggtggtac ttgtttgaat gttggttgta tcccatccaa atctttattg 300
244 aacaactccc atttattaca ccaaatccaa cacgaagcca aagaagagg tatttccatc 360
245 caaggtgaag ttggcgttga ttttccaaaa ttgatggctg ccaaggaaaa agccgtcaaa 420
246 caattgaccg gtggtattga aatgttggtc aaaaagaaca aggttgacta cttgaaagga 480
247 gccggttctt ttgttaacga aaaaaccgtc aaagtcactc caattgacgg cagcgaagca 540
248 caagaagttg aagccgacca catcatcggt gctactgggt ctgaaccaac tccattccca 600
249 ggtattgaaa tagatgaaga aagaattgtc acttctactg gtattttatc attgaaagaa 660
250 gtaccagaaa gattagccat cattggtgga ggtatcattg gtttggaat ggcttccgtt 720
251 tacgcaagat tgggtcttaa agtcaactgt atcgaattcc agaacgctat tgggtgccgtt 780
252 atggatgctg aagttgctaa acaatctcaa aaattattgg ccaacaagg tttggacttc 840
253 aaattaggta caaaggttgt taaaggtgaa agagatgggt aagtgggtcaa gatcgaagtt 900
254 gaagatgtca aatccggtaa aaaatctgac cttgaagccg atgtcttggt ggttgccatt 960
255 ggtagaagac catttactga aggtttgaac tttgaagcca ttggtttaga gaaagataac 1020
256 aaggaagat tgattattga cgaccaatc aagactaac atgaccacat cagagttatt 1080
257 ggggatgtca cattcgggtc tatgttggtc cacaaggctg aagaagaagg tatcgtctgt 1140
258 gctgaatata tcaagaaagg tcacggtcat gtaactatg ctaacatccc ttctgttatg 1200
259 tatactcacc cagaagttgc ctgggttggt ttaaacgaag aacaattgaa agaacaaggc 1260
260 atcaaataca aagtaggtaa attcccattc attgccaact ccagagctaa aaccaacatg 1320
261 gacactgatg gtttcgtgaa attcattgct gatgccgaaa ccaaagagt gttgggtgtc 1380
262 cacattattg gtccaaatgc aggtgaaatg attgctgaag ctggtttggc cttagaatat 1440
263 ggtgcttcca ccgaagacat ttcaagaaca tgtcatgctc atccaacttt atctgaagct 1500
264 ttcaaggaag ctgctttggc cactttgat aagccaatca acttttataa gtgatactga 1560
265 atacaacagt aatgaaaagt aaatactaaa ataatttgat ttgatttttt ttactttttt 1620
266 ttactctttt tgctctcatt ttaagggtta tctaaatact gaattatctg agccatataa 1680
267 gacaatcaca tctatacata aatacacaaa taataacaca tatatattta ttttgaaaaa 1740
268 aaaaaaaaaa 1750
270 <210> SEQ ID NO: 8
271 <211> LENGTH: 721
272 <212> TYPE: DNA

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273 <213> ORGANISM: Candida albicans
275 <400> SEQUENCE: 8
276 gccactgaac cgtacatcac aggacaaatg aacgaaattc actacactaa acatcaccaa 60
277 acttatgtta acaaccttaa tgcttcaatt gaacaagccg ttgaagccaa atctaaaggt 120
278 gaagttaaaa aattggttgc cttacaaaaa gccatcaatt tcaacggtgg tggttacctc 180
279 aatcattggt tgtggtgga aaacttggct cctgtctctc acggtgggtg tcaaccacca 240
280 agtgaagatt ccaaattagg taaacaaatc gtcaaacaat ttggttcttt ggataaattg 300
281 attgaaatca ccaatggcaa attggctggt attcaaggtt ctggatgggc ttttattggt 360
282 aaaaacaaag ccaatgggtga tactattgat gtcacacca ctgctaacca agatactgtt 420
283 actgatctaa acttggttcc attgattgct attgatgctt ggaaacatgc ttattatttg 480
284 caataccaaa atgttaaagc tgattacttc aagaaccttt ggcatgttat caactggaag 540
285 gaagctgaaa gaagatttga attttaagtt actggacaaa agtcaagtac atattttaa 600
286 ccaatattag aaaataaaag agttacttcc gatagtgtg attttgttta atatttcccc 660
287 attgtatata agtatatatg caagaatata ttctgtattg tgatgtaaaa aaaaaaaaaa 720
288 a 721
290 <210> SEQ ID NO: 9
291 <211> LENGTH: 23
292 <212> TYPE: DNA
293 <213> ORGANISM: Artificial Sequence
295 <220> FEATURE:
296 <221> NAME/KEY: modified_base
297 <222> LOCATION: (3)
298 <223> OTHER INFORMATION: i
300 <220> FEATURE:
301 <221> NAME/KEY: modified_base
302 <222> LOCATION: (9)
303 <223> OTHER INFORMATION: i
305 <220> FEATURE:
306 <221> NAME/KEY: modified_base
307 <222> LOCATION: (12)
308 <223> OTHER INFORMATION: i
310 <220> FEATURE:
311 <221> NAME/KEY: modified_base
312 <222> LOCATION: (15)
313 <223> OTHER INFORMATION: i
315 <220> FEATURE:
316 <223> OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
318 <400> SEQUENCE: 9
W--> 319 ggntaygtng cngcnathaa rgc 23
321 <210> SEQ ID NO: 10
322 <211> LENGTH: 23
323 <212> TYPE: DNA
324 <213> ORGANISM: Artificial Sequence
326 <220> FEATURE:
327 <221> NAME/KEY: modified_base
328 <222> LOCATION: (6)
329 <223> OTHER INFORMATION: i
331 <220> FEATURE:
332 <221> NAME/KEY: modified_base

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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/987,190

DATE: 11/19/2001

TIME: 11:12:01

Input Set : A:\1422-0502P.ST25.txt

Output Set: N:\CRF3\11192001\I987190.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:39 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:361 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12